

More than a grain of truth about cereal feeding cattle

For five years now Harbro has been involved in the research of SARA (Sub Acute Ruminal Acidosis), now one of the largest rumen projects done in the UK in the last 25 years. Led by Professor John Wallace from the Rowett Institute of Nutrition and Health, the project was set up by Harbro's Willie Thomson. Harbro's David MacKenzie reported various on farm issues to Mr Thomson, which sparked on farm trials. Other partners included Glasgow Vet School, Strathclyde University, and Danish probiotic company Christian Hanssen. Work has progressed over the last five years with the objective to determine LPS concentration in the rumen and caecum of commercial and pedigree cattle and to compare these measurements to rumen damage scores.

A brief timeline gives some context and background to where we are and the research being done:

1960 – Rowett Barley Beef System

Development of the Rowett Barley Beef System. High levels of cereals fed to finishing cattle causing issues:

- Acidosis
- Laminitis
- Liver Abscesses

2011 – Harbro Begins Trials - SARA Project Formed

Years of intensive cattle feeding and the use of cereals in diets raised many questions but yielded few conclusive answers with regards to underperforming animals and acidosis. Harbro begin trials on beef and dairy cattle.

2014 – Project raises more questions with varying levels of rumen inflammation

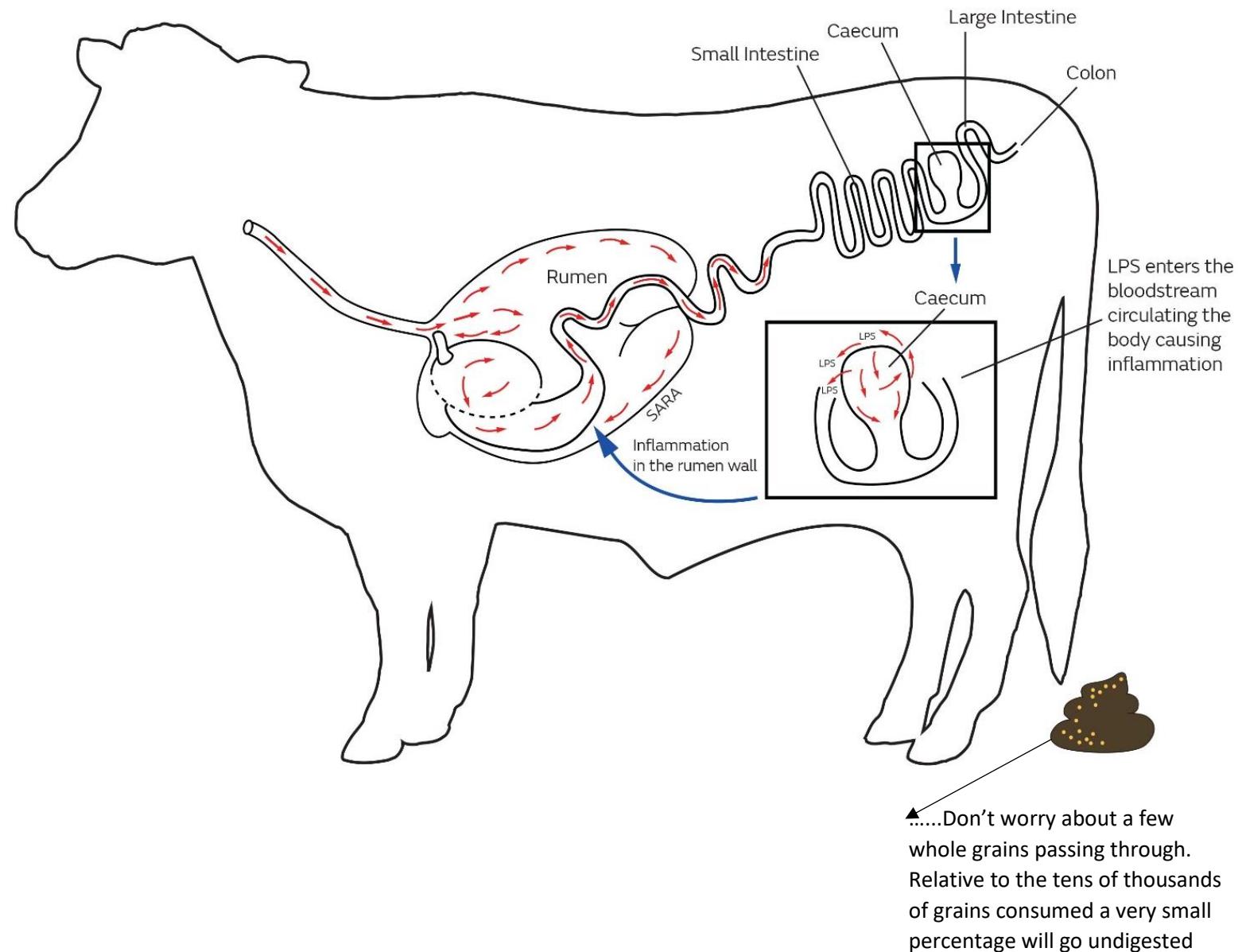
Rumens tested during the project varied in levels of inflammation but not directly linked to acidosis. Work continued, investigating lipopolysaccharide (LPS) concentrations in the caecum (hind gut) resulting from undigested fine particles passing the rumen. On reaching the caecum gram negative bacteria digests these fine particles and produce toxins that enter the blood stream and cause inflammation.

2016 - Increasing numbers of cereal fed cattle, both commercial and pedigree, found to suddenly fail to perform after a period of rapid growth.

Harbro are now looking into other intensive feeding issues. Osteochondritis Dissecans (OCD), a form of arthritis, found in fast growing cattle is being seen and reported more frequently.

- The objective is to avoid fine particles in the rations offered to cattle as these reach the hind gut, and from digestion there, toxins are produced
- Lightly roll grain, avoid hammer milling – taking care if it is dried – very dry grain tends to smash rather than roll. Ideally roll moist grain or Maxammon alkaline grain
- Avoid breaking up grain any further – try to reduce the time grain spends in the mixer creating even smaller particles

- Take great care when introducing feed and changing grain sources, the change can be the trigger for OCD, as can a sudden increase in growth



Contact Harbro 01888 545200 for more details.